**TASK-5: IMPLEMENTING CONTINUOUS INTEGRATION FOR BACKEND**

**Goal**:

* Learn to build CI Pipeline in Azure Devops using YAML.

**1.** Make sure the latest **Dotnet** **Backend** codebase is Present in **Azure Repos**.

**2.** Have the clarity of the Dotnet Build steps.

* Packages are Restored (with the help of Nuget Tool)
* Build Happens (With the help of Build tool)
* Publish happens (With the help of Build Tool)

**3.** Create a Build Pipeline using **Yaml**.

**4.** The Build Pipeline should be **triggered** whenever there is a modification in the master branch of the repository.

**5.** Create 1 Pipeline to run on **Microsoft-Hosted agent**.

**6.** Create a new **VM**.

**7.** Create a New **Agent** **Pool** in Azure Devops.

**8.** Add this VM as an agent by installing necessary Tools like **Git, Dotnet SDK 3.1**

**9.** Create a Build Pipeline to run on **Self-Hosted Agent**.

**TASK-5: PART-2: IMPLEMENTING CONTINUOUS DEPLOYMENT PIPELINE**

**Goal**:

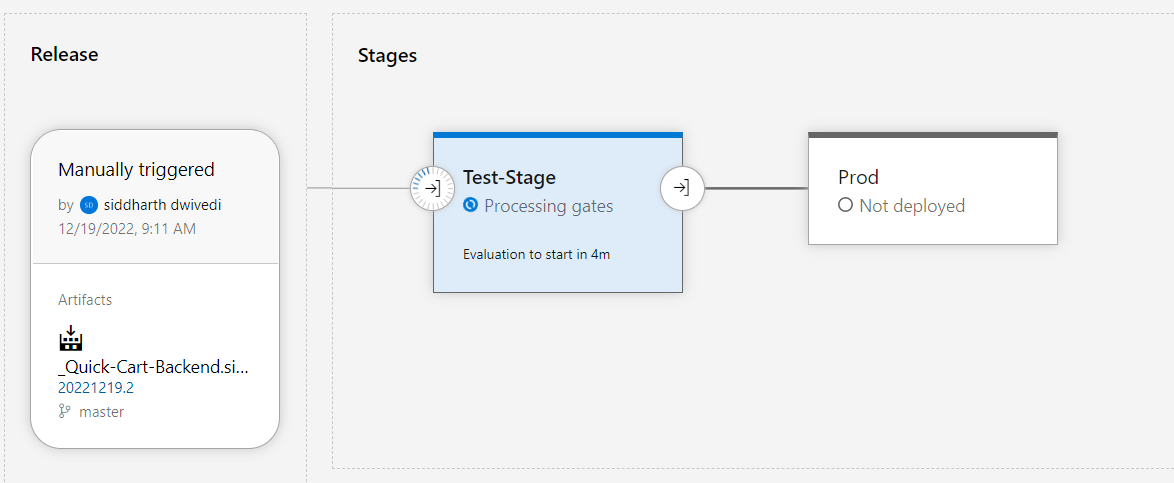
* Learn to build CD mechanism using Classic Interface.
* Understand Approval mechanism.

**1.** Make sure the Source code is present in the Azure Repos.

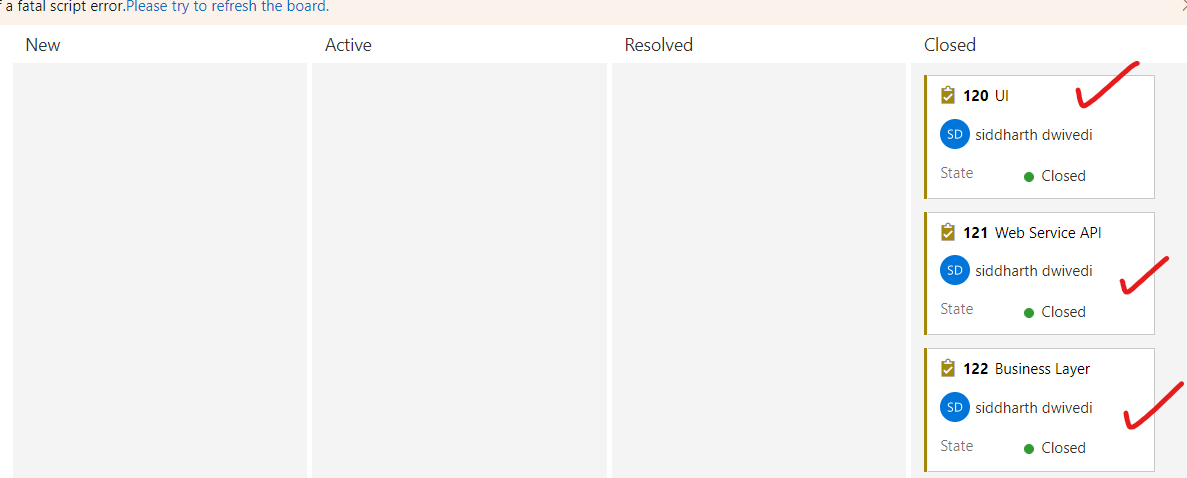
**2.** Make sure the CI Pipeline is building the solution and keeping the Binaries in Artifact.

**3**. Create a new Release Pipeline, which will deploy the changes to Azure App Service.

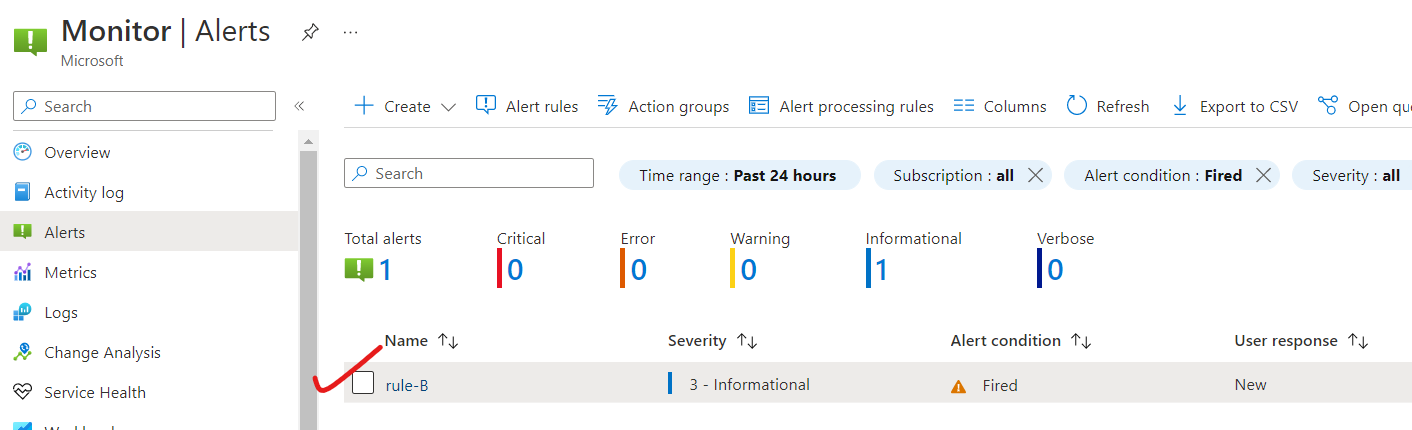
**4**. There should be 2 stages, Test and Prod.



**5**. **Test stage** should have a **Pre-deployment Condition** that All the Tasks should be in closed state from Azure Boards.



**6**. Test Stage should also have a Post-deployment Condition (GATE) that if there is any **Azure Monitor** **Alerts** raised on the Test-App Service (Average Working Memory Set > 1 Byte) then the further deployment should stop.



**7**. Prod Stage should have an Approval in place which would always ask one person for the manual approval before the Prod deployment.

Keep the timeout to be 5 mins.

**8**. Now reference a different DB to this App Service for the Production Stage.

Data Source=quickcart-server.database.windows.net;Initial Catalog=test-dB;user id=demouser; password=Siddharth@1234

Make sure that the DB Value is coming from the Keyvault.